

AMENDMENT TO THE CLAIMS

Listing of Claims:

Claim 1 (Currently Amended): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade having:

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by a maximum thickness located substantially constantly as a percentage of chord and a maximum camber located substantially constantly as a percentage of chord; and

a stagger angle that increases from said root portion to said tip portion.

Claim 2 (Previously Presented): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade having:

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by a maximum thickness located substantially constantly between about 16% chord to about 23% chord and a maximum camber located substantially between about 40% chord to about 51% chord.

Claim 3 (Currently Amended): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade being characterized:

in plan form wherein the blade is varied from said root portion to said tip portion with a maximum chord located between said root portion and said tip portion, said leading edge and said trailing edge of said blade are convex from said root portion to said tip portion; and

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by a maximum thickness located substantially constantly as a percentage of chord; and

a stagger angle that increases from said root portion to said tip portion.

Claim 4 (Currently Amended): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade being characterized:

in plan form wherein the blade is varied from said root portion to said tip portion with a maximum chord located between said root portion and said tip portion, said leading edge and said trailing edge of said blade are convex from said root portion to said tip portion; and

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by a maximum camber located substantially constantly as a percentage of chord; and

a stagger angle that increases from said root portion to said tip portion.

Claim 5 (Original): The blade of Claim 3 where said maximum thickness is located substantially constantly between about 16% chord to about 23% chord.

Claim 6 (Original): The blade of Claim 4 where said maximum camber is located substantially constantly between about 40% chord to about 51% chord.

Claim 7 (Currently Amended): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade being characterized:

in plan form wherein the blade is varied from said root portion to said tip portion with a maximum chord located between said root portion and said tip portion, said leading edge and said trailing edge of said blade are convex from said root portion to said tip portion; and

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by said leading edge being similar to a parabola in shape, convex upper surface, and a lower surface which is convex towards said leading edge and concave towards said trailing edge; and

a stagger angle that increases from said root portion to said tip portion.

Claim 8 (Currently Amended): A blade for an impeller of an axial fan having a root portion, a tip portion, a leading edge, a trailing edge, said blade having:

a cross-sectional shape, taken anywhere along a radius of said blade, characterized by a maximum thickness located substantially constantly as a percentage of chord, said leading edge being similar to a parabola in shape, a convex surface, and a lower surface which is convex towards said leading edge and concave towards said trailing edge; and

a stagger angle that increases from said root portion to said tip portion.